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U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/019,409	Masahiro Iwakura	04853.0084

INTERNATIONAL APPLICATION NO.

PCT/JP00/02112

I.A. FILING DATE

PRIORITY DATE

03/31/2000

06/29/1999

Ernest F Chapman  
 finnegan Henderson Farabow Garrett & Dunner  
 1300 I Street NW  
 Washington, DC 20005-3315

CONFIRMATION NO. 3873

371 FORMALITIES LETTER



\*OC000000007612397\*

Date Mailed: 03/12/2002

### NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- U.S. Basic National Fees
- Priority Document
- Assignee Statement
- Biochemical Sequence Diskette
- Biochemical Sequence Listing
- Copy of IPE Report
- Copy of references cited in ISR
- Copy of the International Application
- Copy of the International Search Report
- Oath or Declaration

RECEIVED

MAR 18 2002

FINNEGAN, HENDERSON,  
 FARABOW, GARRETT & DUNNER, LLP.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

**ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTH FROM THE DATE OF THIS NOTICE OR BY 22 or 32 MONTHS (where 37 CFR 1.495 applies) FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):

- A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
- See attached Raw Sequence Listing Error Report.
- APPLICANT MUST PROVIDE:
  - An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.
  - A statement that the contents of the paper or compact disc and the computer readable form are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b) or 1.825(d).

● For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (703) 308-4216
- To Purchase PatentIn Software, call (703) 306-2600
- For PatentIn Software Program Help, call (703) 306-4119 or e-mail at [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or [patin3help@uspto.gov](mailto:patin3help@uspto.gov)

- A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

BARBARA A CAMPBELL

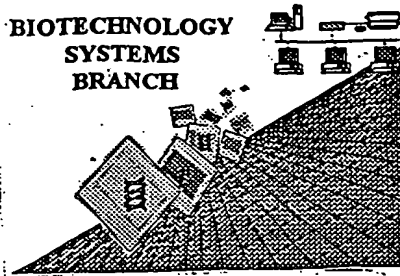
Telephone: (703) 305-3631

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/019,409	PCT/JP00/02112	04853.0084

FORM PCT/DO/EO/905 (371 Formalities Notice)

Docketed 3-18-02 Attorney JBF/NMF/USO  
 Case 4853.0084  
 Due Date 5-12-02 W/EST  
 Action Seq LISTING  
 By J AK



## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/019,409  
Source: PT/10  
Date Processed by STIC: 1/22/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom, including:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name,  
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,  
2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office,  
Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202



PCT10

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/019,409

DATE: 01/22/2002  
TIME: 10:40:21

pg 1-3

Input Set : A:\Es.txt  
Output Set: N:\CRF3\01182002\J019409.raw

Does Not Comply  
Corrected Diskette Needed

2 <110> APPLICANT: Japan as Represented by Secretary of Agency of Industrial Science and  
3 Technology  
--> 4 <120> TITLE OF INVENTION: Sulphur Free Enzyme  
--> 5 <130> FILE REFERENCE: PH-911-PCT  
--> 6 <140> CURRENT APPLICATION NUMBER:  
--> 7 <141> CURRENT FILING DATE: 2001-12-28  
8 <150> PRIOR APPLICATION NUMBER: JP99/183664  
--> 9 <151> PRIOR FILING DATE: 29-JUN-1999 1999-06-29 ← use this date format  
--> 10 <160> NUMBER OF SEQ ID: 10  
11 <170> SOFTWARE: PatentIn Ver. 2.0

*Suggestion: Consult  
Sequence Rule  
for valid  
format*

# RRORED SEQUENCES

40 <210> SEQ ID NO: 2  
41 <211> LENGTH: 566  
42 <212> TYPE: DNA  
43 <213> ORGANISM: E. coli → <220> ← insert this mandatory numeric  
44 <221> NAME/KEY: CDS identifier  
45 <222> LOCATION: (81)...(557) wherever  
--> 46 <400> SEQUENCE: 2  
--> 47 ggatccttga caattagtta actatttgtt ataatgtatt catgagctta actaactaat  
--> 48 ccggaagg aggaacttcc atgacagtc tgattgcggc gctagcggta gatcgcgta  
--> 49 tcggcatgga aaacgccatg ccatggaacc tgcccgccga tctcgccggtg tttaaaccga  
--> 50 acaccttaaa taaaccgctg attatggggc gccatacctg ggaatcaatc ggtaggcctt  
--> 51 tgcccgcccg caaaaatatt atcctcagca gtcaaccggtg gaccgatgat cgggttacct  
--> 52 ggggttaaate ggtcgacgaa gccatcgcg ggcgaggtga cgtaccagaa atcatggtga  
--> 53 ttggcgccg acgcgtttat gaacagttct tgccaaaagc gcaaaagctt tatctgacgc  
--> 54 atatcgatgc agaagtggaa ggcgacaccc attttccgga ttacgagccg gatgactggg  
--> 55 aatcggtatt cagcgaattc cagcatgctg atgcgcagaa ctcgcatagc tattcggtcg  
--> 56 aaatcctcga gcgtcggttaa ggtacc  
90 <210> SEQ ID NO: 4  
91 <211> LENGTH: 558  
92 <212> TYPE: DNA  
93 <213> ORGANISM: B. subtilis → <220> ← insert  
94 <221> NAME/KEY: CDS  
95 <222> LOCATION: (1)...(555)  
--> 96 <400> SEQUENCE: 4  
--> 97 gctagcacag actactggca aaattggact gatgggggag gtatagtaaa cgctgtcaat  
--> 98 ggggtctggcg ggaattacag tggtaattgg tctaataccg gaaattttgt tgggtgtaaa  
--> 99 ggttggaata caggttcgcc atttaggacg ataaactata atgccggagt ttggcgccg  
--> 100 aatggcaatg gatatttaac tttatatggt tggacgagat cacctctcat agaattattat  
--> 101 gtagtggatt catgggggtac ttatagacct actggaacgt ataaaggtag tgtaaaagat

60  
120  
← 2217, 2227, or  
2237 is  
shown  
insert  
cumulative  
nucleotide total  
at right margin  
of each line

same error as  
above

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/019,409

DATE: 01/22/2002  
TIME: 10:40:21

Input Set : A:\Es.txt  
Output Set: N:\CRF3\01182002\J019409.raw

```
--> 102 gatgggggta catatgacat atatacaact acacgttata acgcaccttc cattgatggc
--> 103 gatcgcaacta cttttacgca gtactggagt gttcgccagt cgaagagacc aaccggaagc
--> 104 aacgctacaa tcactttcag caatcatgtg aacgcatgga agagccatgg aatgaatctg
--> 105 ggcagtaatt gggcttacca agtcatggcg acagaaggat atcaaagtag tggctcgtcg
--> 106 aatgttaccg tatggtaa
```

136 <210> SEQ ID NO: 6

137 <211> LENGTH: 569

138 <212> TYPE: DNA

139 <213> ORGANISM: E. coli

140 <221> NAME/KEY: CDS

141 <222> LOCATION: (81)...(560)

--> 142 <400> SEQUENCE: 6

```
--> 143 ggatccttga caattagtta actatttggtt ataatgtatt catgagctta actaactaat
--> 144 ccgaaaaagg aggaacttcc atggcaatca gtctgattgc ggcgctagcg gtagatcgcg
--> 145 ttatcggtcaa cgaaaacgcc ctcccatgga acctgcctgc cgatctcgcc tggtttaaac
--> 146 gcaacacctt aaataaaccc gtgatttacg ggcgccatac ctgggaatca atcggtaggc
--> 147 ctttgcccg cgcaaaaaat attatcctca gcagtcaacc cgggaccgat gatcgggtta
--> 148 cctgggttaa atcggtcgac gaagccatcg cggccgcagg tgacgtacca gaaatcttcg
--> 149 tgattggcgg cggacgcgtt tatgaacagt tcttgccaaa agcgcaaaag ctttatctga
--> 150 cgcatactga tgcagaagtg gaaggcgaca cccattttcc ggattacgag ccggatgact
--> 151 gggaatcggg attcagcgaa ttccacgatg ctgatgcgca gaactcgcat agctattcgt
--> 152 tcgaaatcct cgagcgtcgt taaggatcc
```

208 <210> SEQ ID NO: 8

209 <211> LENGTH: 1153

210 <212> TYPE: DNA

--> 211 <213> ORGANISM: ← MANDATORY response needed (this error also exists in Seqs 7-10)

--> 212 <400> SEQUENCE: 8

```
--> 213 ggatccttga caattagtta actatttggtt ataatgtatt catgagctta actaactaat
--> 214 ccgaaaaagg aggaacttcc atggcaatca gtctgattgc ggcgctagcg gtagatcgcg
--> 215 ttatcggtcaa cgaaaacgcc ctcccatgga acctgcctgc cgatctcgcc tggtttaaac
--> 216 gcaacacctt aaataaaccc gtgatttacg ggcgccatac ctgggaatca atcggtaggc
--> 217 ctttgcccg cgcaaaaaat attatcctca gcagtcaacc cgggaccgat gatcgggtta
--> 218 cctgggttaa atcggtcgac gaagccatcg cggccgcagg tgacgtacca gaaatcttcg
--> 219 tgattggcgg cggacgcgtt tatgaacagt tcttgccaaa agcgcaaaag ctttatctga
--> 220 cgcatactga tgcagaagtg gaaggcgaca cccattttcc ggattacgag ccggatgact
--> 221 gggaatcggg attcagcgaa ttccacgatg ctgatgcgca gaactcgcat agctattcgt
--> 222 tcgaaatcct cgagcgtcgt ggtggcgggtg gctcgggtgg tggcggcgct agcacagact
--> 223 actggcaaaa ttggactgat gggggcggtta tagtaaacgc tgtcaatggg tctggcggga
--> 224 attacagtgt taattggtct aataccggaa attttgttgt tggtaaagggt tggactacag
--> 225 gttcgccatt taggacgata aactataatg ccggagtttg ggcgccgaat ggcaatggat
--> 226 atttaacttt atatggttgg acgagatcac ctctcataga atattatgta gtggattcat
--> 227 ggggtactta tagacctact ggaacgtata aagggtactgt aaaaagtgat gggggtacat
--> 228 atgacatata tacaactaca cgttataacg caccttccat tgatggcgat cgcactactt
--> 229 ttacgcagta ctggagtgtt cgccagtcga agagaccaac cggaagcaac gctacaatca
--> 230 ctttcagcaa tcatgtgaac gcatggaaga gccatggaat gaatctgggc agtaattggg
--> 231 cttaccaagt catggcgaca gaaggatatc aaagtagtgg ctcgtcgaat gttaccgtat
--> 232 ggtaaggatc ccc
```

288 <210> SEQ ID NO: 10

289 <211> LENGTH: 1153

P.3

same

same  
error

as above

same  
error

(insert  
cumulative  
nucleotide  
totals)

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/019,409

DATE: 01/22/2002  
TIME: 10:40:21

Input Set : A:\Es.txt  
Output Set: N:\CRF3\01182002\J019409.raw

```

290 <212> TYPE: DNA
--> 291 <213> ORGANISM: ← insert mandatory response
--> 292 <400> SEQUENCE: 10
--> 293 ggatccttga caattagtta actatttgtt ataatgtatt catgagctta actaactaat
--> 294 ccggaagagg aggaacttcc atggcaatca gtctgattgc ggcgctagcg gtagatcgcg
--> 295 ttatcggaac cgaaaacgcc ctcccatgga acctgcctgc cgatctcgcc tggtttaaac
--> 296 gcaacacctt aaataaaccc gtgatttacg ggcgccatac ctgggaatca atcggtaggc
--> 297 ctttgcccgg ccgcaaaaat attatcctca gcagtcaacc cgggaccgat gatcgggtta
--> 298 cctgggttaa atcggtcgac gaagccatcg cggccgcagg tgacgtacca gaaatcttcg
--> 299 tgattggcgg cggacgcgtt tatgaacagt tcttgccaaa agcgcaaaag ctttatctga
--> 300 cgcatatcga tgcagaagtg gaaggcgaca cccattttcc ggattacgag ccggatgact
--> 301 gggaatcggg attcagcgaa ttccacgatg ctgatgcgca gaactcgcat agctattcgt
--> 302 tcgaaatect cgagcgtcgt ggtggcggtg gctcgggtgg tggcggcgct agcacagact
--> 303 actggcaaaa ttggactgat gggggcggtg tagtaaacgc tgtcaatggg tctggcggga
--> 304 attacagtgt taattggtct aataccggaa attttggtgt tggtaaagggt tggactacag
--> 305 gttcgccatt taggacgata aactataatg ccggagtttg ggcgcggaat ggcaatggat
--> 306 atttaacttt atatggttgg acgagatcac ctctcataga atattatgta gtggattcat
--> 307 ggggtactta tagacctact ggaacgtata aagggtactgt aaaaagtgat gggggtacat
--> 308 atgacatata tacaactaca cgttataacg caccttccat tgatggcgat cgcactactt
--> 309 ttacgcagta ctggagtgtt cgccagtcga agagaccaac cggaagcaac gctacaatca
--> 310 ctttcagcaa tcatgtgaac gcatggaaga gccatggact caatctgggc agtaattggg
--> 311 cttaccaagt catcgcgaca gaaggatatc aaagtagtgg ctcgtcgaat gttaccgtat
--> 312 ggtaaggatc ccc

```

*insert  
cumulative  
totals  
at right  
margin of  
each line*

## VERIFICATION SUMMARY

DATE: 01/22/2002

PATENT APPLICATION: US/10/019,409

TIME: 10:40:22

Input Set : A:\Es.txt

Output Set: N:\CRF3\01182002\J019409.raw

:4 M:283 W: Missing Blank Line separator, <120> field identifier  
:5 M:283 W: Missing Blank Line separator, <130> field identifier  
:6 M:283 W: Missing Blank Line separator, <140> field identifier  
:7 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
:9 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD  
:10 M:283 W: Missing Blank Line separator, <160> field identifier  
:12 M:283 W: Missing Blank Line separator, <210> field identifier  
:16 M:283 W: Missing Blank Line separator, <400> field identifier  
:46 M:283 W: Missing Blank Line separator, <400> field identifier  
:47 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:2  
:254 Repeated in SeqNo=2  
:62 M:283 W: Missing Blank Line separator, <400> field identifier  
:96 M:283 W: Missing Blank Line separator, <400> field identifier  
:97 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:4  
:254 Repeated in SeqNo=4  
:112 M:283 W: Missing Blank Line separator, <400> field identifier  
:142 M:283 W: Missing Blank Line separator, <400> field identifier  
:143 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:6  
:254 Repeated in SeqNo=6  
:157 M:201 W: Mandatory field data missing, <213> ORGANISM  
:158 M:283 W: Missing Blank Line separator, <400> field identifier  
:211 M:201 W: Mandatory field data missing, <213> ORGANISM  
:212 M:283 W: Missing Blank Line separator, <400> field identifier  
:213 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:8  
:254 Repeated in SeqNo=8  
:237 M:201 W: Mandatory field data missing, <213> ORGANISM  
:238 M:283 W: Missing Blank Line separator, <400> field identifier  
:291 M:201 W: Mandatory field data missing, <213> ORGANISM  
:292 M:283 W: Missing Blank Line separator, <400> field identifier  
:293 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:10  
:254 Repeated in SeqNo=10